

**WHAT IS CLAIMED IS:**

1. A method of analyzing blood, comprising:
- (a) reacting a sample of blood with anti-A and anti-B antibodies wherein the antibodies are bound to a detectable label;
  - (b) reacting a sample of blood with reagent red blood cells bearing labeled A antigen and labeled B antigen;
  - (c) subjecting the sample to cytometric analysis; and
  - (d) analyzing the cytometry analysis to determine ABO type.
2. The method of claim 1 wherein the blood is whole blood.
3. The method of claim 1 wherein the sample of blood used in steps (a) and (b) are the same undivided sample.
4. The method of claim 1 wherein the sample of blood used in steps (a) and (b) are each a different portion of a sample from the same patient.
5. The method of claim 1 wherein the detectable label bound to the antibodies is a fluorescent label.
6. The method of claim 5 wherein the fluorescent label is selected from the group consisting of FITC, BODIPY, phycobiliproteins (including phycoerythrin), energy-transfer conjugates of the phycobiliproteins, peridinin chlorophyllin protein, Cascade Blue, AMCA, reactive indocarbocyanine, TRITC, allophycocyanin (APC), phycocyanin (PC), and indodicarbocyanine (Cy5<sup>TM</sup>).

7. The method of claim 1 wherein the labeled A antigen and labeled B antigen are fluorochromes selected from the group consisting of FITC, BODIPY, phycobiliproteins (including phycoerythrin), energy-transfer conjugates of the phycobiliproteins, peridinin chlorophyllin protein, Cascade Blue, AMCA, reactive indocarbocyanine, TRITC, allophycocyanin (APC), phycocyanin (PC), and indodicarbocyanine (Cy5™).

8. A blood analysis kit comprising:

- (a) a first container having therein labeled anti-A, and anti-B antibodies; and
- (b) a second container having therein labeled reagent red blood cells bearing labeled group A antigen and labeled group B antigen.

9. The kit of claim 8 wherein the anti-A antibodies comprise IgM -FITC and the anti-B antibodies comprise IgM-FITC.

10. The kit of claim 8 wherein the reagent red blood cells are group A1, A2, B and/or O.

11. The kit of claim 10 wherein the reagent red blood cells are labeled with fluorochrome selected from the group consisting of reactive dyes (e.g., fluorescein isothiocyanate (FITC), lipophilic dyes, (e.g., merocyanine 540 or DiIC<sub>18</sub>(3)-DS), reactive lipophilic dyes, dyes reacting with membrane structures, and monoclonal antibodies conjugated with fluorescent dyes, the reactivity of these monoclonal antibodies being with a common structure on the red cells (e.g., anti-glycophorin-PE conjugate).

12. The kit of claim 11 wherein the fluorochrome is DiIC<sub>18</sub>(3)-DS.

13. The kit of claim 8 additionally comprising a column agglutination technology (CAT) cassette.

14. A method of performing simultaneous forward and reverse ABO type, comprising:

- (a) reacting a sample of blood with anti-A and anti-B antibodies wherein the antibodies are bound to a detectable label;
- (b) reacting a sample of blood with reagent red blood cells bearing labeled A antigen and labeled B antigen;
- (c) subjecting the sample to cytometric or fluorescence microscopic analysis; and
- (d) analyzing the cytometry or fluorescence microscopic analysis to determine ABO type.

15. The method of claim 14 wherein the blood is whole blood.

16. A method of analyzing blood, comprising:

- (a) reacting a sample of blood with anti-A and anti-B antibodies;
- (b) reacting a sample of blood with reagent red blood cells bearing A antigen and with reagent red blood cells bearing B antigen;
- (c) subjecting the sample to visual analysis; and
- (d) analyzing the visual analysis to determine ABO type.

17. The method of claim 16 wherein the blood is whole blood.

18. The method of claim 16 wherein the sample of blood used in steps (a) and (b) are the same undivided sample.

19. The method of claim 16 wherein the sample of blood used in steps (a) and (b) are each a different portion of a

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sample from the ~~same~~ patient.

*Sub A2*  
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~~20. The method of claim 16 wherein the reagent red blood cells of step (b) are stained.~~

21. The method of claim 20 wherein the analysis is performed by column agglutination technology.

*Sub A3*  
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~~22. The method of claim 21 wherein the column agglutination technology is a BioVue™ cassette.~~

23. The method of Claim 22 wherein the Ortho AutoVue™ System is employed to interpret the agglutination result.

*add A4*  
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~~24. The method of Claim 22 wherein the BioVue™ Reader 2 is employed to interpret the agglutination result.~~